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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/683,523 | 01/13/2002 | Fuhu Chen | 22176-2 | 1538 |

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HOUSTON ELISEEVA
4 MILITIA DRIVE, SUITE 4
LEXINGTON, MA 02421

EXAMINER

ELVE, MARIA ALEXANDRA

ART UNIT

PAPER NUMBER

1725

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-------------------|--------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/683,523 | CHEN ET AL. | |
| | Examiner | Art Unit | |
| | M. Alexandra Elve | 1725 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagarajan et al. (US Pat. 5,824,992).

Nagarajan et al. discloses a metal core weld wire having a steel sheath with a core. The core composition includes iron powder. The core composition of metal-core wires also includes iron powder usually as a filler material, and the core composition comprises generally between approximately 13-45% of the total wire weight. There are many types of metal-core wires; these include low carbon metal-core wires, stainless steel metal-core wires, low alloy metal-core wires and so forth. Nagarajan et al. teaches a carbon content of 0.005-0.15 wt%, manganese 1-4 wt%, silicon 0.2-2.5 wt%, chromium 0.01-15 wt%, nickel 0.01-17 wt% and molybdenum 0.01-18 wt%.

Nagarajan et al. does not disclose the exact amounts as instant claims. The exact amounts of each of the constituents as presently claimed are not disclosed in the prior art; however, the prior art compositions closely approximate or overlap applicant's claimed composition. It has been held that one of ordinary skill in the art at

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the time of the invention would have considered the claimed compositions to have been obvious because close approximation or overlapping ranges in a composition is considered to establish a prima facie case of obviousness. See In re Malagari, 182 USPQ 549, Titanium Metals v. Banner 227 USPQ 773, In re Nehrenberg 126 USPQ 383.

Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagarajan et al. as stated above and further in view of Drossman (US Pat. 5,332,628).

Nagarajan et al. does not teach deposition rates. Drossman discloses a weld wire, which is in the form of a hollow ductile wire having a powdered metal core. The wire comprises mild steel. The wire contains chromium, silicon, manganese, iron, carbon and so forth. The ductile metal sheath surrounding metallic or a combination of metallic and non-metallic powders. The wire is used in electric arc and thermal welding or spraying at deposition rates of 5 to 25 lbs or higher per hour. It would have been obvious to one of ordinary skill in the art at the time of the invention to have noted deposition rates, as stated by Drossman in the Nagarajan et al. system, because these are standard industrial manufacturing specifications.

Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagarajan et al. as stated in above and further in view of Saito et al. (US Pat. 4,593,174).

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Nagarajan et al. does not teach the welding speed. Saito et al. discloses arc welding of low carbon steel. Arc welding was conducted at speeds of 30 to 50 cm/min. It would have been obvious to one of ordinary skill in the art at the time of the invention to note the welding speeds, as stated by Saito et al. because these are standard industrial manufacturing specifications.

Claims 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagarajan et al., as stated above and further in view of Ziemek (US Pat. 3,800,405).

Nagarajan et al. does not teach wire drawing. Ziemek teaches the making of a drawn wire having a core and sheath. The wire is drawn through a series of dies in order to reduce the wire diameter. It would have been obvious to one of ordinary skill in the art at the time of the invention to draw the wire, as taught by Ziemek in the Nagarajan et al. wire because this merely a manufacturing variation.

Response to Amendment

Upon carefully reviewing Applicant's arguments filed August 14, 2003, the Examiner acknowledges the amendments to claims 1-8, 12-13, 15-17 & 20. The claim objections and the 112 second paragraph rejections are withdrawn in view of applicant's amendments.

Response to Arguments

Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Alexandra Elve whose telephone number is 703-308-0092. The examiner can normally be reached on 6:30-3:00 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on 703-308-2383. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

September 30, 2003


M. ALEXANDRA ELVE
PRIMARY EXAMINER